

Appl. No. : 10/764,056
Filed : January 23, 2004

REMARKS

This amendment is in response to the Office Action mailed September 12, 2005. Claims 1-9 and 11-20 are pending. Claims 1 and 3 are currently amended. Claim 10 was previously cancelled. Claims 11-20 were previously withdrawn. Accordingly, Claims 1-9 are currently presented for Examination. No new matter has been added by this amendment.

A typographical error in claim 3 has now been amended to correct the duplication of the word "and."

Regarding the Sequence Listing

The Examiner requests the submission of a Sequence Listing to submit the 22 sequences that are present in on page 26 of the specification. However, Applicants note that the sequence listing, along with a sequence submission statement, was submitted with the application as filed. Further, the table on page 26 lists the sequence identification number of each of the sequences. A copy of the returned post card, indicating that the sequence listing was submitted with the application on January 23, 2004, is attached herewith. Accordingly, Applicants respectfully submit that the sequence listing requirements have been previously fulfilled.

Objections to the Specification

The Examiner objected to the term "plasm" in paragraph [0065], alleging that the term is not recognized in the art and further that the meaning of the term is unclear. Applicants respectfully disagree. The terms "plasm" and "germ plasm" are terms commonly used in plant breeding to refer to the genetic material associated with a particular trait or combination of traits. Those of skill in the art of plant breeding would recognize this term, especially in the context of the sentence in question, which states:

"By repeated back-crossing, the transfer of the MSL plasm from L. perenne to L. multiflorum could be achieved. Here too, MSL material was produced in diploid and tetraploid valence."

The context for the use of the term "plasm" is clearly that of transferring a trait from one species to another through back-crossing. Accordingly, Applicants respectfully request that because this term, as used in the context of the art of plant breeding, is not unclear, the objection should be withdrawn.

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Regarding Submission of Priority Documents

The Examiner requested the submission of a certified copy of the priority application 101 36 378.8 as required by 35 U.S.C. 119(b). This document is being submitted herewith. An English translation of this document has been requested and will be forwarded to the Examiner when it is received.

Regarding the Rejection under 35 U.S.C. § 112, first paragraph

The Examiner rejected Claims 1-9 under 35 U.S.C. § 112, first paragraph, for alleged lack of enablement. The Examiner alleges that the teachings in the specification do not provide enablement for the full scope of the present claims, i.e., a method for the production of completely male sterile plants of the genus *Lolium*. According to the Office Action, only the production of completely male sterile *Lolium perenne* plants with the mutagenic agent N-ethyl urea is sufficiently disclosed, while disclosure of other species such as *L. multiflorum* or *L. hybridum* and other mutagenizing chemicals is missing. Further, the Examiner alleges that the use of mutagenizing chemicals for inducing particular traits is unpredictable, requiring undue trial and error experimentation to use the claimed invention.

Applicants respectfully disagree. The person skilled in the art, due to his or her technical knowledge, is aware of the numerous teaching providing concentration ranges of other mutagenizing agents apart from N-ethyl urea, and how to use these agents. For example, the book cited by the Examiner (Poehlman et al. *Breeding Field Crops*. 4th ed.) provides an indication for effectively performing mutagenesis (1st paragraph of the chapter "*Mutation induction*");

"The mutagen dose administered should be sufficient to kill about 50 % of the seeds to obtain the maximum number of mutations."

Furthermore, the examples provided in the present application indicate how to determine which mutagenized seeds have become male sterile. These determination methods can be applied analogously for the mutagenized caryopses material of species of the genus *Lolium* other than *L. perenne*.

Regarding the Rejection under 35 U.S.C. § 112, first paragraph

The Examiner rejects claim 1 under 35 U.S.C. § 112, second paragraph, as being incomplete. In response to this rejection, claim 1 has now been amended to add a second step having the language "regenerating the mutagenized material into plantlets or plants."

The Examiner rejects claim 8 under 35 U.S.C. § 112, second paragraph, as being indefinite for allegedly failing to point out the subject matter which the Applicant regards as the invention. In particular, the Examiner alleges that the term "the method according to Alexander" does not particularly point out the method nor does it distinguish it from other methods that may be used by Alexander.

Applicants disagree. The specification contains ample description of the "method according to Alexander." For example, page 10, paragraph [0042] of the specification states that:

"Preferably, the test methods are staining methods, such as for example the method according to Alexander (MP. Alexander, Differential staining of aborted and nonaborted pollen, Stain Technology 1969. 44/3, 117-122) (...). The corresponding reagents for the above-mentioned staining methods are shown in Table 1."

Further, Table 1 on page 22 of the specification indicates the exact composition of the staining solution according to Alexander. Finally, Example 1 (page 14, paragraph [0062]) describes the use of the method:

"The 1200 M₁ plants were then visually inspected for pollen distribution, whereupon 20 individual plants were at first classified as sterile. The individual plants preselected in this way were then tested by three different test methods directed to the pollen vitality (see Table 1):

1. Method according to Alexander (see above), 2. Light green reagent (Šinska, see above), 3. Lugol's solution. After examination 19 individual plants were classified as partially sterile and one single plant (M 361) was classified as completely sterile."

Applicants respectfully submit that by defining the method via a literature reference and the staining solution via its exact composition, the specification sufficiently points out the subject matter of claim 8.

For all of the above reasons, Applicants respectfully request the withdrawal of all rejections under 35 U.S.C. § 112, first and second paragraphs, and allowance of the pending application.

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CONCLUSION

Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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